

**INDIVIDUAL PROPERTY/DISTRICT  
MARYLAND HISTORICAL TRUST  
INTERNAL NR-ELIGIBILITY REVIEW FORM**

Property/District Name: Amtrak Railroad or Perryville Road Bridge over the Susquehanna River Survey Number: HA-1712

Project: ACE/MDE Application #199861938 T61955 Agency: COE/MDE

Site visit by MHT Staff: X no    yes Name                                  Date                                 

Eligibility recommended X Eligibility **not** recommended           

Criteria: X A    B X C    D Considerations:    A    B    C    D    E    F    G    None

Justification for decision: (Use continuation sheet if necessary and attach map)

The Amtrak Railroad or Perryville Road Bridge (MHT #HA-1712) is a 1906 Deck-and-Through Truss Bridge, made of open hearth steel with stone piers. The north and south spans are not of equal length, and the southern span is the shorter of the two. While most of the spans are deck trusses, the 277' center span is constructed of two Pratt through trusses. This span rotates on a center pivot, a feature which popularized swing spans among engineers in the early twentieth century. The bridge was constructed by the Pennsylvania Railroad and replaced an 1866 wood and steel bridge. There do not appear to be any identifying plaques attached to the bridge. Finally, the bridge retains excellent integrity of materials and setting. Therefore, based on the information provided, the bridge is eligible for the National Register of Historic Places under Criterion A, as an example of an early twentieth century railroad bridge built by an important American railroad company (transportation) and under Criterion C, as an example of engineering which acknowledges two different modes of transportation and allows each to function with little interference from the other.

Documentation on the property/district is presented in: Project Review and Compliance Files

Prepared by: Harry E. Bailey, Qwest Network Construction Services

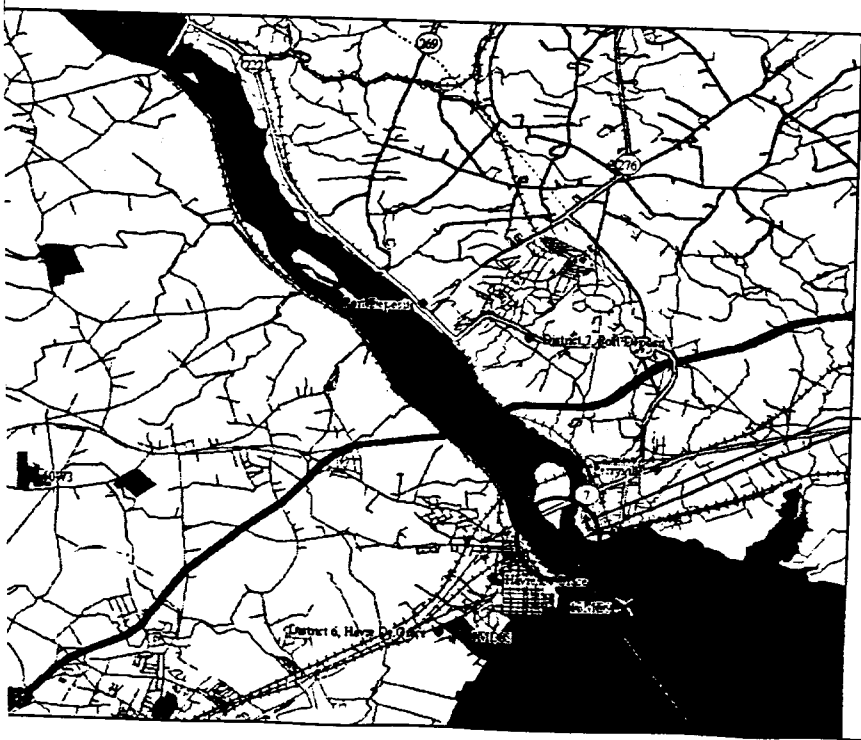
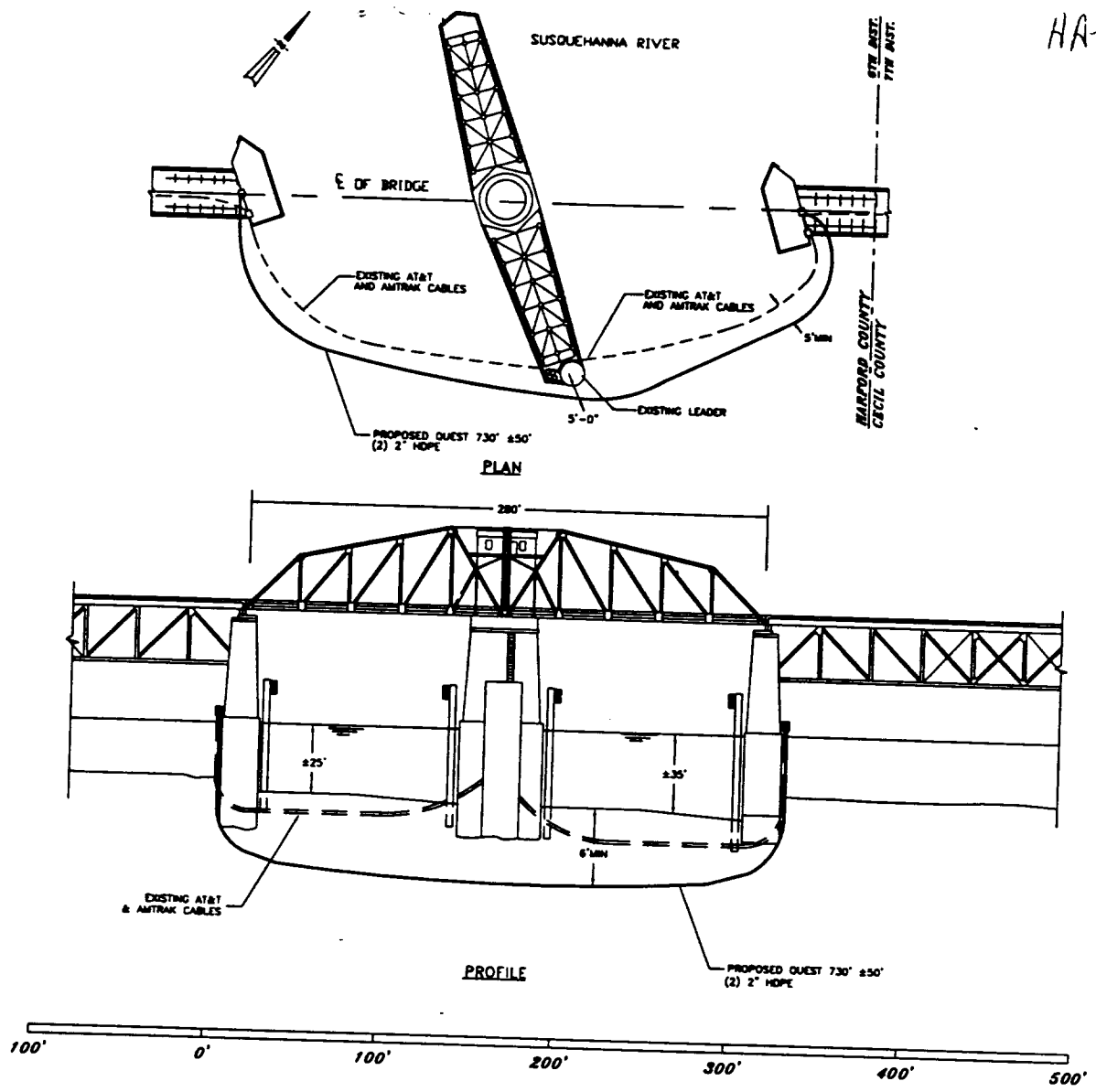
Anne E. Bruder 2/25/98  
Reviewer, Office of Preservation Services Date

NR program concurrence: X yes    no    not applicable

Peter E. Kuntz 2/25/98  
Reviewer, NR program Date

*am*

HA-1712



SUSQUEHANNA RIVER  
LAT: 39°33'  
LONG: 76°05'

Qwest		DATE	
Communications		BY	
STANDARD		1"=100'	
SUSQUEHANNA RIVER		DRAWING NUMBER	
AMTRAK BRIDGE #60.07		1 OF 1	
HARFORD COUNTY, MARYLAND		FOR REVIEW	



SUSPENSE HASNA

4<sup>th</sup> conduit across  
UNTIL SERIAL

HA-1712

JUN/97

ID367-481 (10) CTK

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY	
RECEIVED	HA-1712
DATE ENTERED	

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

AND/OR COMMON

Susquehanna River Bridge

2 LOCATION

STREET & NUMBER

NOT FOR PUBLICATION

CITY, TOWN

Havre de Grace

CONGRESSIONAL DISTRICT

1

STATE

Maryland

CODE

24

COUNTY

Cecil

CODE

015

3 CLASSIFICATION

CATEGORY

- ☐ DISTRICT
- ☐ BUILDING(S)
- ☒ STRUCTURE
- ☐ SITE
- ☐ OBJECT

OWNERSHIP

- ☐ PUBLIC
- ☒ PRIVATE
- ☐ BOTH
- ☐ PUBLIC ACQUISITION
- ☐ IN PROCESS
- ☐ BEING CONSIDERED

STATUS

- ☒ OCCUPIED
- ☐ UNOCCUPIED
- ☐ WORK IN PROGRESS
- ☐ ACCESSIBLE
- ☐ YES RESTRICTED
- ☐ YES UNRESTRICTED
- ☐ NO

PRESENT USE

- ☐ AGRICULTURE
- ☐ MUSEUM
- ☐ COMMERCIAL
- ☐ PARK
- ☐ EDUCATIONAL
- ☐ PRIVATE RESIDENCE
- ☐ ENTERTAINMENT
- ☐ RELIGIOUS
- ☐ GOVERNMENT
- ☐ SCIENTIFIC
- ☐ INDUSTRIAL
- ☒ TRANSPORTATION
- ☐ MILITARY
- ☐ OTHER

4 OWNER OF PROPERTY

NAME

AMTRAK

STREET & NUMBER

955 L'Enfant Plaza, SW

CITY, TOWN

Washington, D.C.

VICINITY OF

STATE

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. Real Estate Department-AMTRAK

STREET & NUMBER

955 L'Enfant Plaza, SW

CITY, TOWN

Washington, D.C.

STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Northeast Corridor Aerial Reconnaissance of Historic Structures

DATE

13-15 April, 1977

☒ FEDERAL ☐ STATE ☐ COUNTY ☐ LOCAL

DEPOSITORY FOR SURVEY RECORDS

Federal Railway Administration  
2100 2nd Street, S.W., RM. 4613

CITY, TOWN

Washington, D. C. 20590

STATE

# **DESCRIPTION**

NA-1712

**CONDITION**☐ EXCELLENT☐ GOOD☒ FAIR☐ DETERIORATED☐ RUINS☐ UNEXPOSED**CHECK ONE**☐ UNALTERED☐ ALTERED**CHECK ONE**☐ ORIGINAL SITE☐ MOVED DATE \_\_\_\_\_

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**DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE**

The Perryville Bridge over the Susquehanna River is a center bearing swing bridge. The superstructure of the bridge is of open hearth steel and the piers are stone masonry. The substructure's height above mean high water is 52 inches. From north to south the bridge consists of one deck truss 192 feet long; eight deck trusses each 255 feet long; a swing span 277 feet long; seven deck truss spans each 195 feet long; and a deck truss span 192 feet long. The total length is 4,155 feet.

The swing span consists of two pratt through-trusses carrying two tracks on stringers and floorbeams that frame into the lower chord of the trusses. The dead loads from the through trusses are carried by a cross girder. The drum rolls on steel rollers that ride in a track secured to the masonry. When the bridge is opened, the dead load of the bridge is carried by the center bearing, and the rollers balance the bridge. In the closed position, wedges are driven under the cross girder at the connection to the trusses. The line load is thus carried by the wedges and not the center bearing or rollers.

The drive machinery is located in the operator's house at the center of the span above track level. It is a 150-horsepower diesel engine connected to a hydraulic torque converter.

The structural steel of Perryville bridge is in good condition but the ties and guard timber are deteriorated. The operating machinery works satisfactorily.

PERIOD		AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION	
1400-1499	<input type="checkbox"/> ARCHEOLOGY HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE	
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE	
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN	
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER	
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION	
<input checked="" type="checkbox"/> 1900	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)	
		<input type="checkbox"/> INVENTION			

SPECIFIC DATES

BUILDER/ARCHITECT

## STATEMENT OF SIGNIFICANCE

The Perryville Bridge over the Susquehanna River is one of three center bearing swing bridge constructed in 1906 for the Pennsylvania Railroad.

The movable bridge is an ancient type that can be changed in position so as to open a clear passage, or to afford an increased headway for ships and boats in navigable channels. Engineers choose this type of bridge when no other way of giving vertical clearance for the passage of vessels on a waterway exists. The introduction of railroads to the U.S. in the early 1800's greatly spurred the development and construction of this type of bridge. Along the eastern seaboard the large number of navigable rivers and inlets to be crossed resulted in the construction of fifteen movable bridges on what is today the Northeast Corridor rail line. There are three basic types of movable bridges--the bascule, the swing, and the vertical lift. On the Northeast Corridor there are nine bascule bridges, five swing bridges, and one vertical lift bridge. These bridges were prefabricated at the construction company's plant and then built by unskilled labor at the site. The machinery to operate the bridges was not standardized and each one has unique mechanical components.

Swing bridges were generally used in place of bascule or vertical lift bridges when the waterway was wide enough to allow for side clearance in the channel. At the turn of the century swing bridges also allowed for economy in building and maintenance.

The two types of swing bridges are rim bearing and center bearing. In the U.S. the earliest records of iron bridges shows them to be the rim bearing type. Later the use of the center bearing type increased until it became more popular than the rim bearing bridge. The design of center bearing bridges was much improved by C.C. Schneider, Engineer of the Pencoyd Iron Works, in the period from 1887 to 1900. Later, while he was Consulting Engineer of the American Bridge Company his strong advocacy of this type of swing bridge influenced the opinions of many engineers and firmly established the center bearing design in American practice.

In the center bearing swing bridge, of which Perryville is an example, the weight is supported by a center pivot. When this type of bridge is in an open position, rollers around the circular girder keep the bridge balanced while the dead load of the structure is transmitted from the main through trusses by cross girders to the center pivot. When the bridge is closed, wedges at the center pier are inserted under the trusses so that the load is transferred directly to the pier.

# 9 MAJOR BIBLIOGRAPHICAL REFERENCES

HA-1712

Condit, Carl. American Building. Chicago: University of Chicago Press, 1968.

Hool, George, ed. Movable and Long-Span Bridges. New York: McGraw-Hill Book Co., Inc., 1923.

## 10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 1

UTM REFERENCES

A 1 8 4 0 6 6 6 6 4 3 7 8 6 3 0  
ZONE EASTING NORTHING

B                                               
ZONE EASTING NORTHING

C                                               
D                                               
VERBAL BOUNDARY DESCRIPTION

This bridge is on the Northeast Corridor railroad line across the Susquehanna River at Perryville, Maryland.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
Maryland	24	Harford	025
STATE	CODE	COUNTY	CODE
Maryland	24	Cecil	015

## 1 FORM PREPARED BY

NAME / TITLE

Anne Baggerman, Cultural Resources Planner

August 10, 1977

ORGANIZATION

DeLeuw, Cather, Parsons & Associates, Northeast Corridor Project

STREET & NUMBER

1201 Connecticut Avenue

TELEPHONE

(202) 452-5242

CITY OR TOWN

Washington, D. C. 20036

STATE

## 12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL   

STATE   

LOCAL   

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION  
TEST:

DATE

KEEPER OF THE NATIONAL REGISTER



UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM

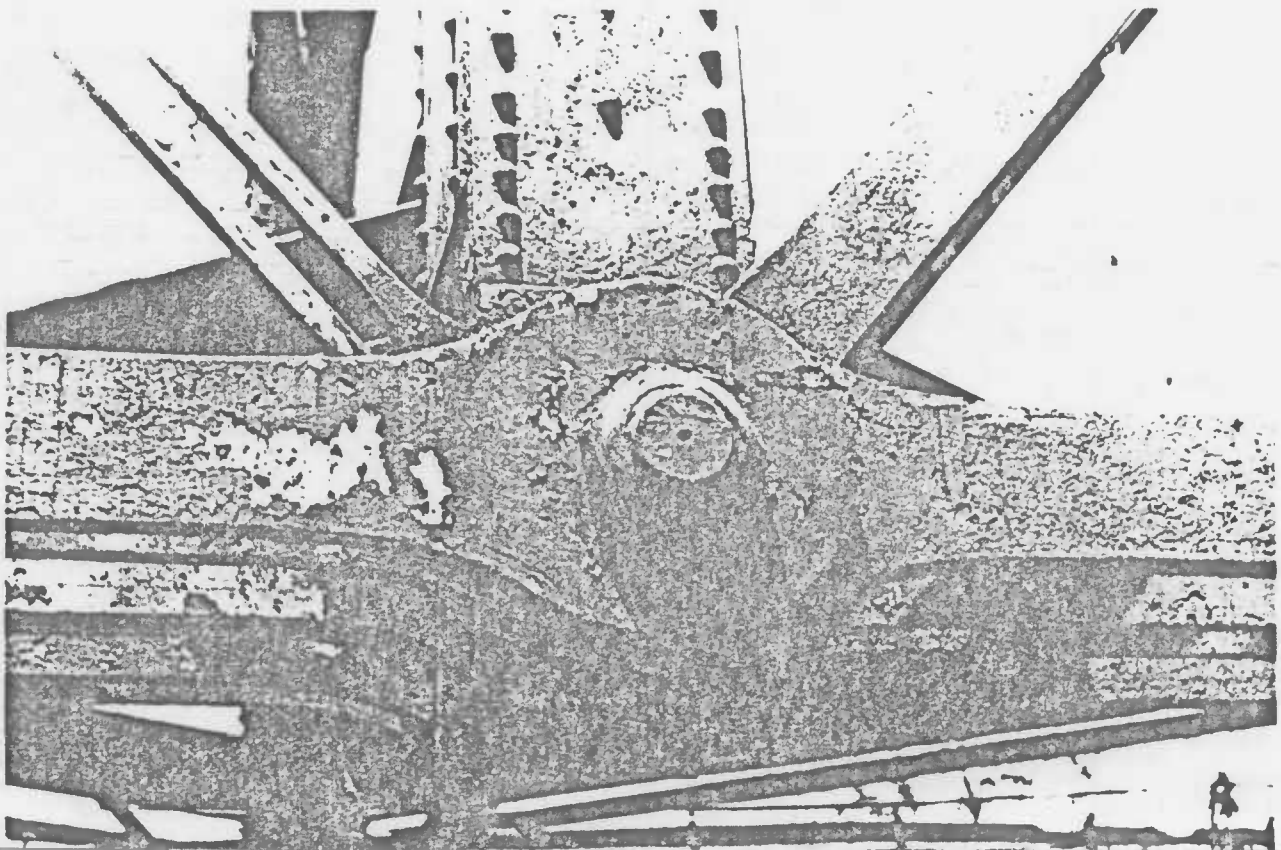
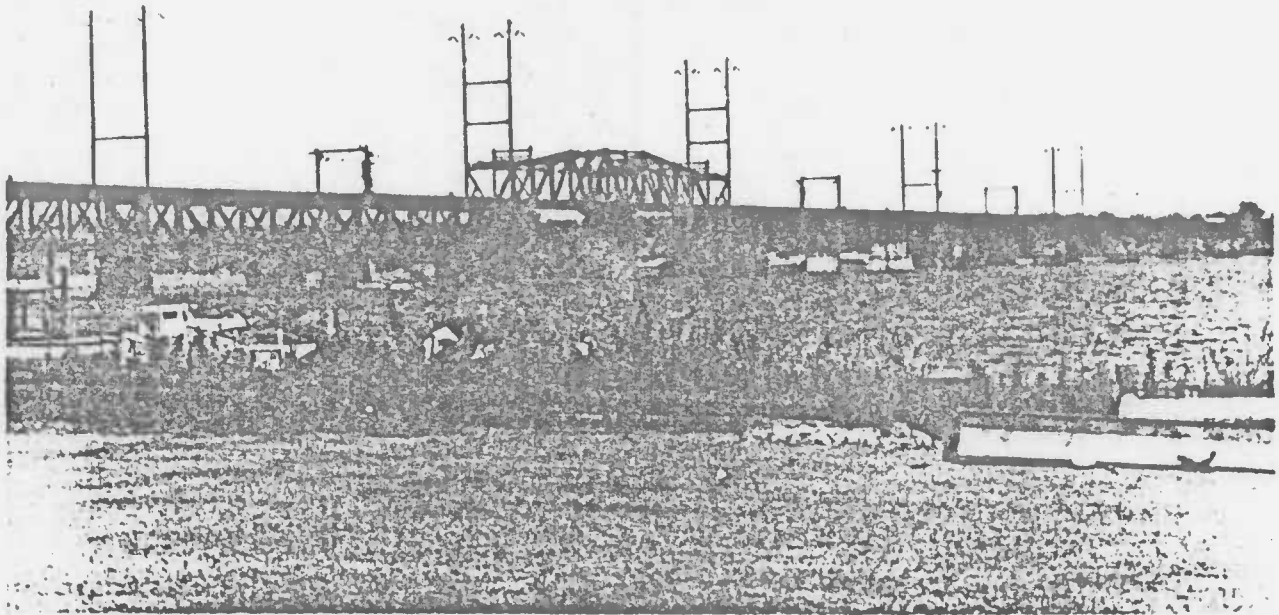
CONTINUATION SHEET

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Major Biographical References:

Hovey, Otis Ellis. Movable Bridges, Vol. I and II. New York:  
John Wiley and Sons, Inc., 1926.

U.S. DOT, Northeast Corridor High Speed Rail Passenger Service  
Improvement Project, Tasks 15.1 and 15.2, Vol. VI, Jan. 1977.



NA-1712

